UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,405	02/26/2002	Robert J. Kunz	10012922-1	6237

7590   09/13/2005

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EXAMINER
RUDOLPH, VINCENT M

ART UNIT	PAPER NUMBER
2624	

DATE MAILED: 09/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/087,405	KUNZ, ROBERT J.
	Examiner	Art Unit	
	Vincent Rudolph	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>26 February 2002</u>.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>26 February 2002</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-16 are rejected under 35 U.S.C. 102(b) as being unpatentable by Garr

('420).

Regarding claim 9, Garr ('420) discloses an imaging device, such as a printer

(See Figure 1), which has a memory (See Figure 1, Element 16, 30, 32 and 34) with

computer-readable instructions for distributing the metrics information to the RIP (the

Raster Image Processing system of the printer) in determining a whole number value

and send it to the host computer after a printing job is complete (See Col. 8, Line 31-

50). A processor (See Figure 1, Element 14) has address, data, and control lines (See

Col. 4, Line 44-45) for fetching and executing the computer-readable instruction from

the memory, which is it operatively coupled in order to carry out the instructions properly

(See Figure 1). Within the distributed computing environment the first device, such as a

printer, receives a command to perform an imaging operation (See Figure 5, Element

330; Col. 12, Line 44-45). The first device then performs the imaging operation (See

Figure 5, Element 322; Col. 12, Line 48-51). Once printing the image operation, the

metrics information, such as toner graduation level, is sent and displayed on a second

device, such as a host computer, which has to show the new toner level change

immediately via a gas gauge (See Figure 7; Col. 18, Line 31-34). The second device

does not send any request to the first device regarding the metrics information; only the

printer sends this information to it (See Col. 18, Line 18-25).

Regarding claim 10, Garr ('420) discloses the metrics information communicated

includes a page count displaying the total number of pages printed (See Figure 7,

Element 516), the predicted number of pages remaining (See Figure 7, Element 520)

and the print media type, such as the cartridge type (See Figure 7, Element 504); all

displayed within the second device, such as the host computer's monitor (See Figure 7).

Regarding claim 11, Garr ('420) discloses the metrics information is not directly

solicited by the second device, such as the host computer, from the first device, such as

the printer, since the host computer accepts and tracks toner gradation changes from

the printer (See Col. 17, Line 61-65).

Regarding claim 12, Garr ('420) discloses the metrics information also comprises

the updated toner utilization information, such as the gas gauge, which is updated after

every print job and displayed on the second device, such as the host computer's

monitor (See Figure 7, Element 504; Col. 18, Line 31-35).

Regarding claims 1-8, the rationale provided in rejection of claims 9-12 is

incorporated herein respectively. In addition, the imaging device of claims 9-12

corresponds to the method and computer-readable medium of claims 1-8 and performs

the steps disclosed, respectively.

Regarding claim 13, Garr ('420) discloses within the distributed computing

environment a way for transmitting device operational metrics information, such as a

printer's toner data and page count (See Figure 7; Col. 10, Line 40-45). Within the

distributed computing environment a server device, such as a host computer, receives

the imaging metrics information from an imaging device that performed the imagine

operation (See Col. 18, Line 18-30). When the server device receives the imaging

metrics, it automatically communicates the imaging metrics information to an application

that displays this data on a monitor (See Figure 7; Col. 18, Line 18-34).

Regarding claim 14, Garr ('420) discloses the imagine device is a printer (Col. 3,

Line 46-52).

Regarding claim 15, Garr ('420) discloses the metrics information includes a

page count displaying the total number of pages printed (See Figure 7, Element 516),

the predicted number of pages remaining (See Figure 7, Element 520) and the print

media type, such as the cartridge type (See Figure 7, Element 504).

Regarding claim 16, Garr ('420) discloses the metrics information also comprises

the updated toner utilization information, such as the gas gauge, which is updated after

every print job (See Figure 7, Element 504; Col. 18, Line 31-35).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Garr

('420) in view of Suyehira (Pub. # 20020172520).

Regarding claim 17, Garr ('420) discloses an application, or a program (See

Figure 7), to display the updated toner and other print data information after every print

job (See Col. 18, Line 18-25).

Garr ('420) does not disclose the application comprises a billing utility or an order

processing unit.

Suyehira (Pub. #20020172520) discloses an automatic ordering system that

detects whenever a replaceable component is low on toner to order a replacement toner

cartridge (See Paragraph 0034). The completed order is stored within the printer with

the tracking information included (See Paragraph 0035).

It would have been obvious to one of ordinary skill in the art at the time of

invention by the applicant to have an ordering processing unit of Suyehira (Pub.

#20020172520) and incorporate it into the distributed computing environment of Garr

('420) because whenever the toner is near or at the bottom, the printer can not only

detect the level and send this data to display on the server device's monitor, but also

order a replacement component automatically. This saves a user the hassle of ordering

a replacement whenever the present cartridge is abruptly out.

Thus, claim 17 is rejected under 35 U.S.C. 103(a).

Claims 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Garr ('420) in view of Stone and Mathworks.com.

Regarding claim 18, Garr ('420) discloses the server device, or host computer, gets the updated data from the printer so the application program can display it (See Figure 7) with the updated imaging operational metrics information (See Col. 14, Line 40-46), and the server device can also communicate the operational metrics information to the application (See Col. 14, Line 42-46).

Garr ('420) does not disclose the server device receiving a registration request from the application program.

Polling is defined as a way to make continuous requests for data from another device. Another way to have the requested information is by a real-time interrupt, which is defined as a signal informing the program an event has happened. This can temporarily stop a program until the interrupt is complete. The theory of polling and interrupt have been taught since the 1983 book Microcomputer Interfacing by Harold S. Stone, and each has its own advantages. According to Mathworks.com, polling for a program, in this instance, is better because it can execute the request at the required sample time rather than in a given base sample time and overload the system.

It would have been obvious to one of ordinary skill in the art at the time of invention by the applicant to have the theory of polling incorporated into the application program disclosed by Garr ('420) since polling for a program, in this instance, is better because it can execute the request at the required sample time rather than in a given base sample time and overload the system.

Thus, claim 18 is rejected under 35 U.S.C. 103(a).

Regarding claim 19, Garr ('420) discloses within the distributed computing

environment a way for transmitting device operational metrics information, such as a

printer's toner data and page count (See Figure 7; Col. 10, Line 40-45). Within the

distributed computing environment a server device, such as a host computer, receives

the imaging metrics information from an imaging device that performed the imaging

operation (See Col. 18, Line 18-30). The server device gets the updated data from the

printer, and gets the updated data from the printer so the application program can

display it (See Figure 7) with the updated imaging operational metrics information (See

Col. 14, Line 40-46), and the server device can also communicate the operational

metrics information to the application (See Col. 14, Line 42-46).

Garr ('420) does not disclose the server device receiving a registration request

from the application program.

Polling is defined as a way to make continuous requests for data from another

device. Another way to have the requested information is by a real-time interrupt, which

is defined as a signal informing the program an event has happened. This can

temporarily stop a program until the interrupt is complete. The theory of polling and

interrupt have been taught since the 1983 book Microcomputer Interfacing by Harold S.

Stone, and each has its own advantages. According to Mathworks.com, polling for a

program, in this instance, is better because it can execute the request at the required

sample time rather than in a given base sample time and overload the system.

It would have been obvious to one of ordinary skill in the art at the time of

invention by the applicant to have the theory of polling incorporated into the application

program disclosed by Garr ('420) since polling for a program, in this instance, is better because it can execute the request at the required sample time rather than in a given base sample time and overload the system.

Thus, claim 19 is rejected under 35 U.S.C. 103(a).

Regarding claim 20, Garr ('420) discloses the metrics information includes a page count displaying the total number of pages printed (See Figure 7, Element 516), the predicted number of pages remaining (See Figure 7, Element 520) and the print media type, such as the cartridge type (See Figure 7, Element 504).

Regarding claim 21, Garr ('420) discloses the metrics information also comprises the updated toner utilization information, such as the gas gauge, which is updated after every print job (See Figure 7, Element 504; Col. 18, Line 31-35).

Regarding claim 22, the rationale provided in claim 19 is incorporated herein and Garr ('420) also discloses a server, or a host computer, which inherently has memory, such as RAM or ROM, comprising computer-executable instructions for providing real-time image metrics information. The server, or host computer, also inherently has a processor, such as a CPU, which is operatively coupled to the memory by way of a motherboard on a computer. The processor is configured to both fetch and execute the computer-executable instructions from memory. This is used to receive an unsolicited set of imaging operational metrics information from an imagine device that performed the imagining operation (See Col. 18, Line 18-30).

Conclusion

The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure is: Shimbori (Pub. #20040204986), Hayward ('997) and Naka

('695).

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Vincent Rudolph whose telephone number is (571) 272-

8243. The examiner can normally be reached on Monday through Friday 8 A.M. - 4:30

P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David Moore can be reached on (571) 272-7437. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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published applications may be obtained from either Private PAIR or Public PAIR.

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For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Vincent Rudolph
Examiner
Art Unit 2624
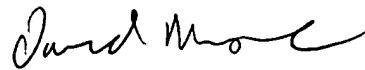
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